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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KLAUS SCHNEIDER
and WILHELM KRAEUTLER

Appeal 2015-002501
Application 12/820,315
Technology Center 3700

Before JOHN C. KERINS, KEN B. BARRETT, and JAMES P. CALVE,
Administrative Patent Judges.

CALVE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the final rejection of claims 1–5, 7–14, 16, 17, and 20. *See* Br. 19. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

Claims 1 and 12 are independent. Claim 1 is reproduced below.

1. A hydraulic system having a hydraulic circuit including a first hydraulic power unit and a feed pump for feeding hydraulic fluid to adjust for changes in pressure within the hydraulic circuit, wherein the feed pump is driven by a hydraulic drive motor driven by a second hydraulic power unit.

REJECTIONS

Claims 1–5, 7–14, 16, 17, and 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1–3, 8, 12–14, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Reinhardt (US 4,553,391, iss. Nov. 19, 1985).

Claims 1, 2, 8, and 12–14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kosek (US 4,026,107, iss. May 31, 1977).

Claims 1–3, 8, 12–14, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Satzler (US 5,878,569, iss. Mar. 9, 1999).

Claim 1, 9, 12, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Endo (US 6,378,301 B2, iss. Apr. 30, 2002).

Claims 1, 2, 4, 7, and 12–14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Macit (US 6,122,913, iss. Sept. 26, 2000).

Claims 1–5, 8, 10–14, 16, 17, and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rose (US 6,973,782 B2, iss. Dec. 13, 2005).

Claim 7 is rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable over Rose.

ANALYSIS

Claims 1–5, 7–14, 16, 17, and 20 as being indefinite

Independent Claims 1 and 12

The Examiner found that the recital of a feed pump that adjusts for changes in pressure in the hydraulic circuit in claims 1 and 12 is unclear and not supported by the Specification.¹ Final Act. 2. The Examiner found that it is unclear how the feed pump is connected to the hydraulic circuit with the first power unit or how the pressure fluctuations arise. *Id.* The Examiner further found that Appellants' argument that the feed pump is adjusted in response to the pressure change is not supported in the Specification, and the second power unit (not the feed pump) is the only element that adjusts to pressure changes in the hydraulic circuit. Ans. 12.

We agree with Appellants that a skilled artisan would understand that claims 1 and 12 recite a hydraulic system and method for feeding hydraulic fluid in which a feed pump feeds hydraulic fluid to adjust for changes in the pressure in the hydraulic circuit. Br. 6–7. Appellants disclose feed pump 20 is connected with both halves of the first hydraulic circuit to feed hydraulic fluid to the circuit to avoid cavitation and to redeliver hydraulic fluid that escapes from the hydraulic circuit due to external leakages. Spec., 13:1–5, Fig. 1. Feeding hydraulic fluid to avoid cavitation, which we understand to involve the formation of liquid-free zones due to rapid changes of pressure in a fluid, can be understood to adjust for pressure changes in the circuit.

We do not sustain the rejection of claims 1 and 12 as indefinite.

¹ Appellants subsequently amended claim 1 to recite “a feed pump for feeding hydraulic fluid to adjust for changes in pressure ~~fluctuations~~ within the hydraulic circuit.” Response to Office Action, filed March 21, 2014, 2.

Claim 9

Claim 9 depends from claim 1 and recites that “the feed pump feeds hydraulic fluid into one or more hydraulic circuits comprising a hydraulic pump and a hydraulic motor, via one or more check valves.” The Examiner found this phrase confusing because claim 1 already recites that the feed pump feeds hydraulic fluid into a hydraulic circuit including a first hydraulic power unit. Final Act. 3. The Examiner found that it is unclear what the relationship of the one or more hydraulic circuits of claim 9 is to have to the hydraulic circuit of claim 1 and what relationship the pump and motor of claim 9 is to have to the first hydraulic power unit of claim 1. *Id.*; Ans. 12.

Appellants argue that the language of claim 9 is clear because such hydraulic power units are well known as the main driving components of hydraulic systems and consist of a motor, reservoir, and pump. Br. 7–8.

A skilled artisan would not understand the scope of claim 9 from the Appellants’ disclosure and language of the claims. It is unclear whether the “one or more hydraulic circuits” of claim 9 include the hydraulic circuit of claim 1 or are additional hydraulic circuits besides the hydraulic circuit of claim 1. Because claim 1 recites a feed pump for feeding hydraulic fluid to a hydraulic circuit, claim 9 should recite the feed pump feeding fluid to one or more *additional* hydraulic circuits if Appellants intend claim 9 to cover hydraulic circuits in addition to the hydraulic circuit of claim 1. If the one or more hydraulic circuits of claim 9 includes the hydraulic circuit of claim 1, then claim 1’s recital of “a feed pump *for feeding* hydraulic fluid to adjust for changes in pressure within the hydraulic circuit” could be seen as a statement of intended use, where claim 9 recites that the feed pump “for feeding” of claim 1 actually feeds fluid to one or more circuits.

Appellants' Specification does not clarify this ambiguity. Appellants disclose embodiments in which feed pump 5 feeds a single circuit (Fig. 1) and embodiments in which feed pump 20 feeds two circuits (Fig. 2).

Claim 9's recital of hydraulic circuits comprising a hydraulic pump and a hydraulic motor does not clarify this ambiguity. It is unclear whether the "first hydraulic power unit" of claim 1 also comprises these elements or whether only the "one or more hydraulic circuits" of claim 9 comprise these two elements. Thus, we sustain the rejection of claim 9 for indefiniteness.

Claim 11

Regarding claim 11, the Examiner finds that the "third displacement machine" is confusing because claim 1 recites that the feed pump is driven by a hydraulic drive motor that is driven by a second hydraulic power unit, but claim 11 recites that the hydraulic drive motor of claim 1 is driven by a third displacement machine so that the third displacement machine appears to be the same element as the second hydraulic power unit of claim 1. Final Act. 3; Ans. 13–14.

Appellants argue that the "third displacement machine" is a different element, i.e., element 50, in Figures 3 and 5 of their disclosure. Br. 8–9.

A skilled artisan would not understand the scope of claim 11 from the Appellants' disclosure and language of the claims. It is unclear how a "third displacement machine" relates to the hydraulic drive motor that drives the feed pump of claim 1 or to the second hydraulic power unit that drives the hydraulic drive motor. Figures 3 and 4 show an inlet of a third displacement machine 50 connected to an outlet of feed pumps 21, 22. The outlet of third displacement machine 50 is not connected to an inlet of the hydraulic drive motors 31, 32 that drives feed pumps 21, 22, as recited in claim 11.

It is unclear how the inlet of the hydraulic drive motor that is driven by a second hydraulic power unit in claim 1 also is connected to the outlet of a third displacement machine in claim 11. Appellants' disclosure does not clarify this ambiguity, as discussed above. *See Spec.*, 15; Figs. 3, 4.

Thus, we sustain the rejection of claim 11.

Claim 14

Claim 14 depends indirectly from claim 1 and recites that “the feed pump feeds hydraulic fluid with a pressure below 70 bar, with a pressure between 0.1 and 50 bar.” Appellants disclose that the feed pump is operated with a delivery pressure below 70 bar, in particular with a pressure between 0.1 and 50 bar. *Spec.*, 11:8–9.

The Examiner found that claim 14 is indefinite because it is unclear whether the larger or smaller range is claimed. *Final Act.* 3–5; *Ans.* 14.

Appellants argue that the limitations are not conflicting because 0.1 to 50 bar is below 70 bar. *Br.* 9.

A skilled artisan would not understand the scope of claim 14 from the Appellants' disclosure and language of claim 14. It is unclear whether the broader range of below 70 bar is being claimed or the narrower range of 0.1 to 50 bar. Appellants' arguments that 0.1 to 50 bar is within the range of below 70 bar does not clarify this ambiguity. If Appellants intend to claim a range between 0.1 and 50 bar, then the further recitation of a pressure below 70 bar appears superfluous to the claim scope sought. If a pressure below 70 bar is being claimed, then claiming a range of between 0.1 and 50 bar is superfluous. Thus, it is unclear whether a device that operates at above 50 bar, but below 70 bar, falls within the scope of claim 14.

Thus, we sustain the rejection of claim 14 for indefiniteness.

Claims 1–3, 8, 12–14, and 16 as anticipated by Reinhardt

The Examiner found that Reinhardt discloses a hydraulic system and method, as claimed, including a feed pump (first hydrostatic machine 15) driven by hydraulic drive motor (second hydrostatic machine 16) that is driven by a second hydraulic pump (not shown) via valve 22. Final Act. 4.

Appellants argue that Reinhardt discloses a hydraulic circuit control device that maintains pulling force constant but does not disclose systems that compensate for pressure changes in a hydraulic circuit, as recited in claims 1 and 12. Br. 13. Appellants argue that Reinhardt does not disclose a hydraulic system with a hydraulic circuit having a first hydraulic power unit and a feed pump for feeding hydraulic fluid to adjust for changes in pressure within the hydraulic circuit, wherein the feed pump is driven by a hydraulic drive motor driven by a second hydraulic power unit, as claimed. *Id.*

Appellants' arguments, which recite limitations of claims 1 and 12 and assert that Reinhardt does not disclose those limitations, do not apprise us of error in the Examiner's findings that Reinhardt does disclose those limitations (Final Act. 4; Ans. 14–15, 16). *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (approving of Board's practice set forth in *Ex Parte Frye* of requiring applicants to identify error in an Examiner's rejections); *Ex Parte Frye*, Appeal 2009-006013, 2010 WL 889747, at *4 (BPAI Feb. 26, 2010) (precedential) (panel reviews rejections for error based on issues identified by an appellant). Merely restating claim limitations and asserting that the limitations are not found in the prior art does not identify error in a rejection. *See In re Lovin*, 652 F.3d 1349 (Fed. Cir. 2011); 37 C.F.R. § 41.37(c)(1)(iv).

We thus sustain the rejection of claims 1 and 12 and their dependent claims, which are not argued separately. 37 C.F.R. § 41.37(c)(1)(iv); Br. 18.

Claims 1, 2, 8, and 12–14 as anticipated by Kosek

The Examiner found that Kosek discloses a hydraulic system and method having a first hydraulic power unit (cylinder 9) and a feed pump (hydraulic pump 8) that is driven by a hydraulic drive motor 7 that is driven by a second hydraulic pump 2 and electric motor 1 where the feed pump supplies fluid to first hydraulic power unit 9, as claimed. Final Act. 4.

Appellants argue that Kosek discloses an electrohydraulic press drive but does not disclose a hydraulic system that adjusts for pressure changes in a hydraulic circuit, as recited in claims 1 and 12. Br. 14. Appellants argue that Kosek does not disclose a hydraulic system with a hydraulic circuit having a first hydraulic power unit and a feed pump driven by a hydraulic drive motor driven by a second hydraulic power unit to adjust for pressure changes in a hydraulic circuit, as claimed. *Id.*

Appellants' arguments are not persuasive because they merely recite limitations of claims 1 and 12 and assert that Kosek does not disclose those limitations without explaining why the Examiner's findings that Kosek does disclose the limitations of claims 1 and 12 (Final Act. 4; Ans. 14–15, 16) are in error. We therefore sustain the rejection of claims 1 and 12 and their respective dependent claims, which are not argued separately. *See* Br. 18.

Claims 1–3, 8, 12–14, and 16 as anticipated by Satzler

The Examiner found that Satzler discloses a hydraulic system having a first hydraulic power unit (actuators 28, 30, 32) and a feed pump (fluid transfer device 68) that is driven by a hydraulic drive motor (fluid transfer device 66) that is driven by second hydraulic pumps (free piston engine 12 and one of power modifying units 54, 56 and that feeds fluid to the first hydraulic power unit, as claimed. Final Act. 4.

Appellants argue that Satzler discloses an energy conservation system but not disclose a feed pump driven by a hydraulic drive motor driven by a second hydraulic power unit to adjust for pressure changes in a hydraulic circuit as claimed. Br. 15. Appellants argue that Satzler does not disclose a hydraulic system including a hydraulic circuit having a first hydraulic power unit and feed pump that is driven by a hydraulic motor driven by a second hydraulic power unit, as recited in claims 1 and 12. *Id.*

Appellants' arguments are not persuasive because they merely recite limitations of claims 1 and 12 and assert that Satzler does not disclose those limitations without explaining why the Examiner's findings that Satzler does disclose the limitations of claims 1 and 12 (Final Act. 4; Ans. 14–15) are in error. We thus sustain the rejection of claims 1 and 12 and their respective dependent claims, which are not argued separately. *See* Br. 18.

Claim 1, 9, 12, and 14 as anticipated by Endo

The Examiner found that Endo discloses a hydraulic system having a hydraulic drive motor (first pump motor 16) driving a feed pump (second pump motor 17) that feeds fluid to a hydraulic circuit(s) including hydraulic pump (primary hydraulic pump 10) and the hydraulic motor via check valve 37 and the drive motor is operated selectively with a greater pressure and a correspondingly smaller delivery rate than the feed pump. Final Act. 5.

Appellants argue that Endo discloses a pressurized fluid recovery or reutilization system for operating accumulators but does not disclose a feed pump driven by a hydraulic drive motor driven by a second hydraulic power unit to adjust for pressure changes in a hydraulic circuit, as claimed. Br. 16. Appellants also argue that Endo does not disclose a hydraulic system with a first hydraulic power unit and feed pump, as recited in claims 1 and 12. *Id.*

Appellants' arguments are not persuasive because they merely recite limitations of claims 1 and 12 and assert that Endo does not disclose those limitations without explaining why the Examiner's findings that Endo does disclose the limitations of claims 1 and 12 (Final Act. 5; Ans. 14–15) are in error. We thus sustain the rejection of claims 1 and 12 and their respective dependent claims, which are not argued separately. *See* Br. 18.

Claims 1, 2, 4, 7, and 12–14 as anticipated by Macit

The Examiner found that Macit discloses a hydraulic system including a hydraulic circuit including control blocks 8 and a first hydraulic power unit (hydraulic device 10) and a feed pump (second variable-delivery pump 7) that feeds hydraulic fluid to the hydraulic circuit and first power unit 10 and is driven by a hydraulic drive motor 6 and a second hydraulic power unit (variable displacement hydraulic pump 2), as claimed. Final Act. 5.

Appellants argue that Macit discloses a drive for a mobile operating device but does not disclose a feed pump driven by a hydraulic drive motor driven by a second hydraulic power unit to adjust for pressure changes in a hydraulic circuit, as claimed. Br. 17. Appellants argue that Macit does not disclose a hydraulic system including a first hydraulic power unit and a feed pump that adjusts for changes in pressure, as recited in claims 1 and 12. *Id.*

Appellants' arguments are not persuasive because they merely recite limitations of claims 1 and 12 and assert that Macit does not disclose those limitations without explaining why the Examiner's findings that Macit does disclose the limitations of claims 1 and 12 (Final Act. 5; Ans. 14–15, 16) are in error. We therefore sustain the rejection of claims 1 and 12 and their respective dependent claims, which are not argued separately. *See* Br. 18.

Claims 1–5, 8, 10–14, 16, 17, and 20 as anticipated by Rose

The Examiner found that Rose discloses a hydraulic pump (main hydraulic unit 12) that drives a hydraulic drive motor 18 that drives a fixed displacement feed pump 16 that supplies fluid to a circuit that includes a second pump and drive motor. Final Act. 5.

Appellants argue that Rose discloses a hydraulic fluid system with a remote charge pump but does not disclose a feed pump driven by a hydraulic drive motor driven by a second hydraulic power unit to adjust for pressure changes in a hydraulic circuit, as claimed. Br. 17–18. Appellants also argue that Macit does not disclose a hydraulic system having a hydraulic circuit with a first hydraulic power unit and a feed pump, as recited in claims 1 and 12. *Id.* at 18.

Appellants' arguments are not persuasive because they merely recite limitations of claims 1 and 12 and assert that Rose does not disclose those limitations without explaining why the Examiner's findings that Rose does disclose the limitations of claims 1 and 12 (Final Act. 5; Ans. 14–15, 16) are in error. We therefore sustain the rejection of claims 1 and 12 and their respective dependent claims, which are not argued separately. *See* Br. 18.

Claim 7 as anticipated by, or unpatentable over, Rose

Appellants argue that claims 2–5, 7–11, 13, 14, 16, 17, and 20 are patentable due to their dependence from their respective independent claims. Br. 18. Because we sustain the rejection of claim 1 as anticipated by Rose, we sustain the rejection of claim 7, which depends indirectly from claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We affirm the rejection of claims 9, 11, and 14, and we reverse the rejection of claims 1–5, 7, 8, 10, 12, 13, 16, 17, and 20 for indefiniteness.

We affirm the rejection of claims 1–3, 8, 12–14, and 16 as anticipated by Reinhardt.

We affirm the rejection of claims 1, 2, 8, and 12–14 as anticipated by Kosek.

We affirm the rejection of claims 1–3, 8, 12–14, and 16 as anticipated by Satzler.

We affirm the rejection of claims 1, 9, 12, and 14 as anticipated by Endo.

We affirm the rejection of claims 1, 2, 4, 7, and 12–14 as anticipated by Macit.

We affirm the rejection of claims 1–5, 7, 8, 10–14, 16, 17, and 20 as anticipated by Rose.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED